



# ***DEFENSE ACQUISITION CHALLENGE (DAC) PROGRAM***

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## **Comparative Testing Office (CTO)**

**Deputy Under Secretary of Defense**

**Advanced System & Concepts**

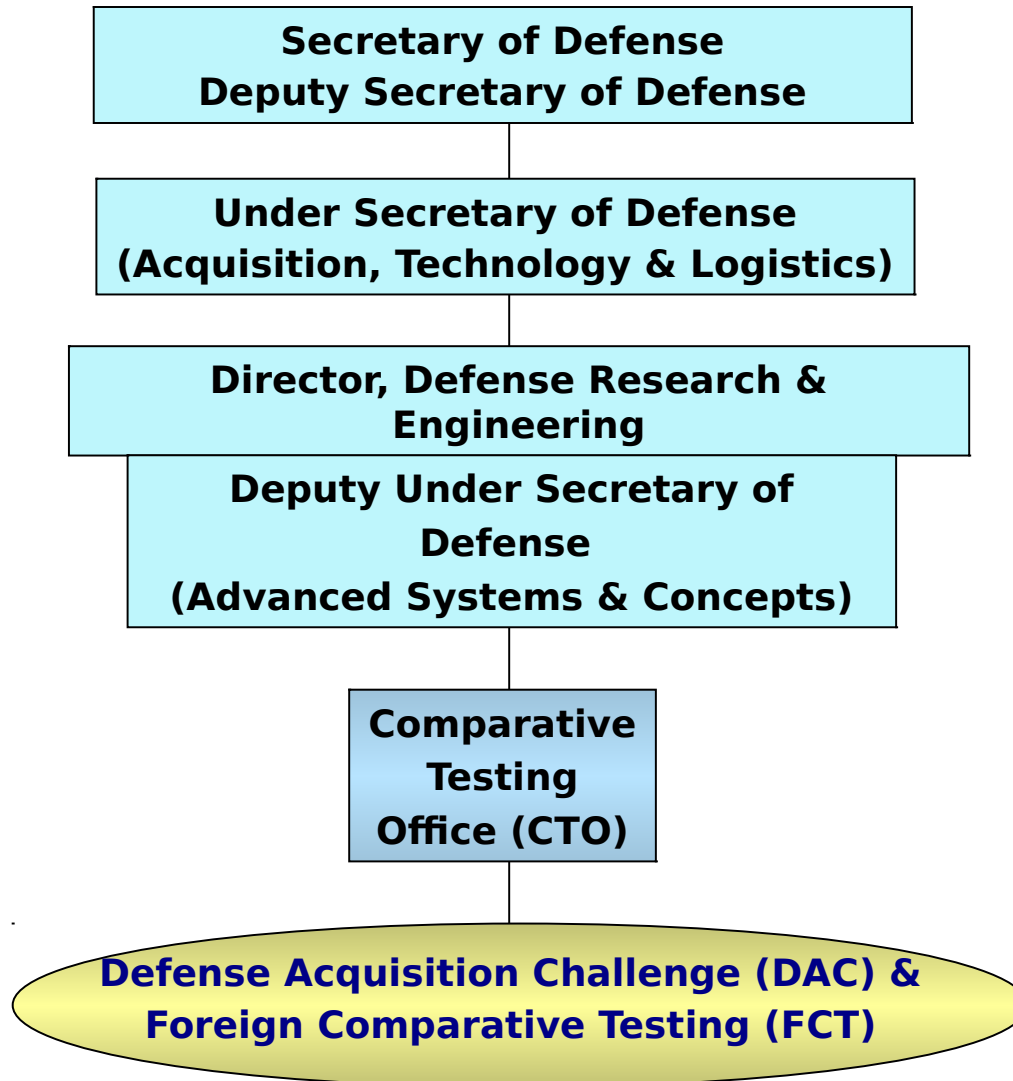
**3700 Defense Pentagon, 3E114**

**Washington, D.C. 20301-3700**

**Voice: (703) 602-3740/ FAX (703) 602-3748**

**<http://www.acq.osd.mil/cto>**

# ***DAC Organization in OSD***



# Overview

## W

- Authorized by Title 10, USC, Sec 2359b, the Defense Acquisition Challenge (DAC) Program provides *increased opportunities* for the introduction of *innovative and cost-saving technologies* into DoD acquisition programs. Provides an “on-ramp” to DoD acquisition system for small and medium vendors.
- DAC provides oversight and funds for the Test and Evaluation of technologies that have potential to improve current acquisition programs at component, subsystem, or system level
- DAC uses an established network of Service and U.S. Special Operations Command (USSOCOM) liaison offices

# ***DAC Process: OSD Guidance***

- ***Warfighter Issues***

- ***Improved Operations***

- ✓ Effectiveness (lethality, accuracy, endurance)
    - ✓ Survivability (protection, agility, stealth, medical)
    - ✓ Force Protection (defensive systems, detection, armoring, chemical - biological defense)
    - ✓ Sustainability (lighter / combined equipment, longer missions, better batteries)

- ***Direct Warfighter Support***

- ✓ Logistics (supply chain management in the field, equipment reliability)
    - ✓ Teaming (e.g., Network & Info Centric Operations at the tactical or operational level)
    - ✓ Surveillance, tagging and tracking (blue and hostile forces tracking, friendly identification)

- ***Warfighter Employment***

- ✓ Planning capabilities (large unit employment)
    - ✓ Coordinating capabilities (Network / Info Centric Operations at the strategic level)
    - ✓ Transport capabilities (getting to and from the fight)
    - ✓ Operational readiness (equipment availability, maintainability, training)

- ***Other National Priorities, as provided in Defense Planning Guidance (DPG)***

- ***Critical Cost Growth Threshold Breaches (Nunn-McCurdy) - - FY07 NDAA***

- “Solicit proposals that provide ***solutions to design, engineering, manufacturing or technology integration issues*** which have caused critical cost growth of an acquisition program”

# ***Evaluation Criteria***

- An initial review of each proposal for:
  - Merit
  - Improvements in performance; affordability; manufacturability; operational capability at the component, subsystem or system level of an acquisition program
  - Rapid implementation at acceptable cost and without unacceptable disruption
- If passes, then a “full” review is completed by the program office and the prime system contractor
  - Independent review using the above criteria
  - Include assessment of the cost of adopting and implementing
  - Consideration of intellectual property rights

DAC provides an “on-ramp” into the defense acquisition system.

# ***Two-Phase Process***

## Phase One

- Any person or activity within or outside the DoD interested in participating can submit a DAC proposal along with a quad chart using the templates provided in the BIDS website:  
<https://cto.acqcenter.com/osd/portal.nsf> (unclassified only)
- All proposals receive:
  - ✓ Administrative Review
  - ✓ Technical Review
  - ✓ Program Manager Review
  - ✓ OSD Review
  - ✓ Selection/Non-selection
- Evaluation criteria for selection includes as a minimum
  - ✓ Does the proposal have merit?
  - ✓ Will the result achieve improvements in performance, affordability, manufacturability or operational capability?
  - ✓ Can the acquisition program be implemented rapidly and without disruption, at an acceptable cost? (*DAC focuses on technologies that are ready to transition – technology readiness levels 6-9*)

Proposals meeting above criteria are prioritized based on potential for providing innovative and cost-saving technologies to meet the DoD acquisitions programs and ability to meet the warfighter needs

# ***Two-Phase Process***

## Phase Two

- Sponsoring government program offices refine the first phase proposal addressing:
  - ✓ Key performance parameters
  - ✓ Preliminary test plan
  - ✓ Cost analysis
  - ✓ Funding required for test
  - ✓ Length of evaluation period
- DAC final proposal will need letter of endorsement with intent to procure, project chart, and quad chart
- Classified proposals can be accepted through the mail

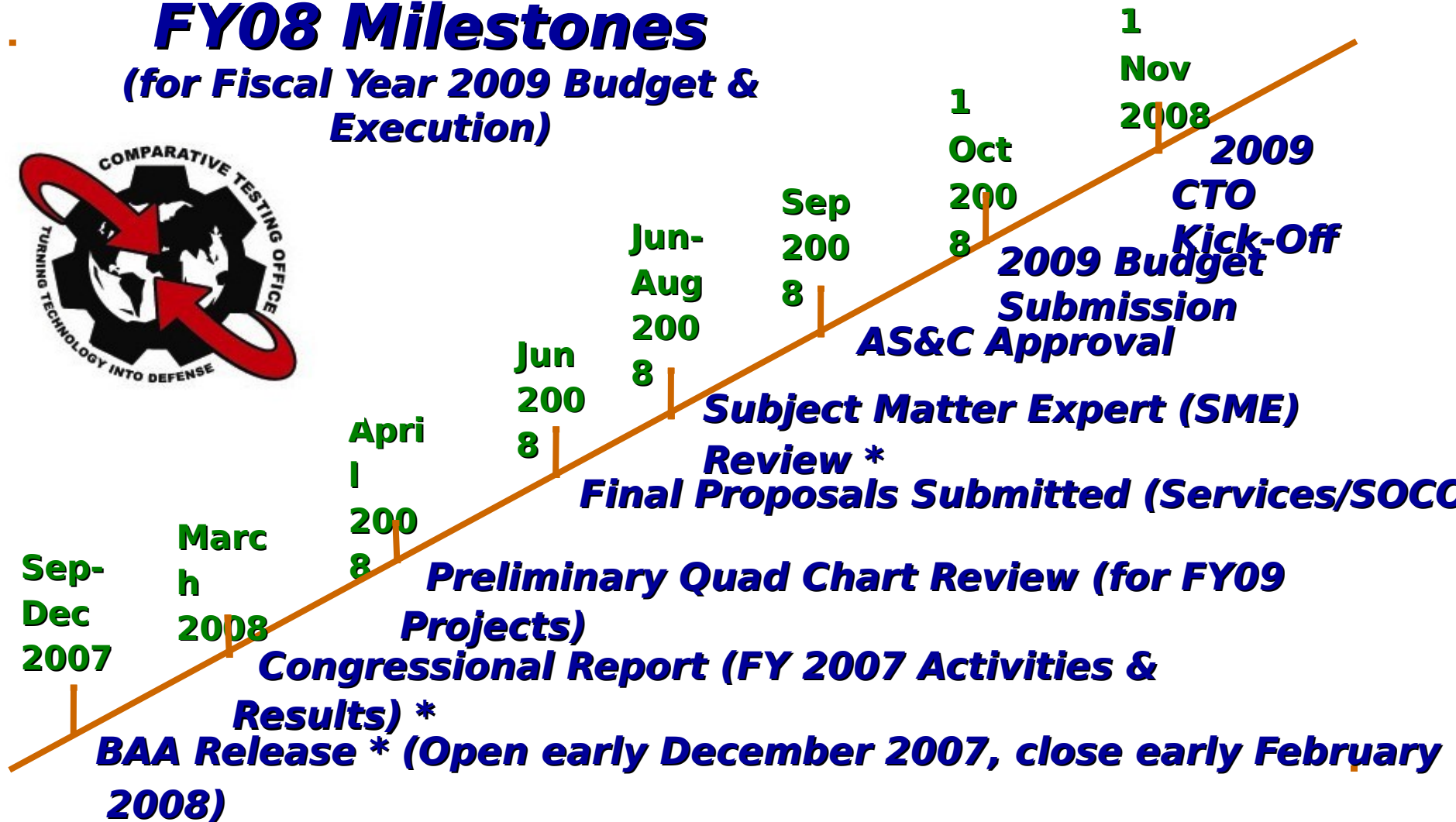
Selection for funding is highly competitive and submitters are notified of the outcome of their proposal evaluation

# DAC Process / Timelines

## Proposal Preparation and Submission

### FY08 Milestones

(for Fiscal Year 2009 Budget & Execution)



\* Statutory Requirements: Conduct BAA, establish panel of experts to provide review & eval of proposals, and submit report

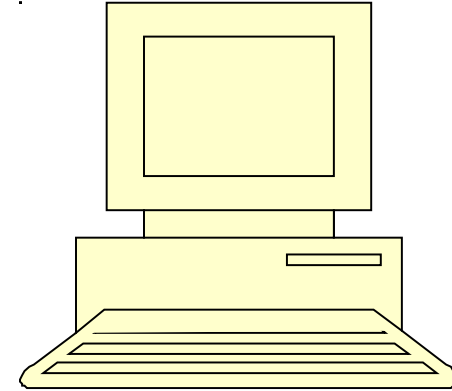
# ***Solicitation for FY 2009***

Document Type: BAA

Solicitation Number: TBD

Posted Date: TBD

Close Date: TBD



To submit a proposal you must register on CTO Portal homepage, then login, go to DAC and follow instruction set.

Anticipate the BAA for FY2009 will be posted on web in early December 2007 at:

[www.fedbizopps.gov](http://www.fedbizopps.gov)

<https://cto.acqcenter.com/osd/portal.nsf>

# ***Steps for Submission***

1. Read submission guidelines
2. Submit Draft Proposal IAW guidelines
3. Contact the Service/USSOCOM DAC focal point to determine status and revise your Draft Proposal if more info needed
4. If Draft Proposal is “Accepted” by a Program of Record/Program Manager (PM) the PM, with the assistance of the item vendors, will submit a DAC Final Proposal

Projects with more than 24 months of test and evaluation will be considered case by case

# ***Primary DAC Points of Contact***

<b>OSD Program Office</b>	<b>(703) 602-3</b>
<b>U.S. Army Focal Point</b>	<b>(703) 806-0999</b>
<b>U.S. Navy Focal Point</b>	<b>(703) 696-4225</b>
<b>U.S. Air Force Focal Point</b>	<b>(703) 588-6</b>
<b>USSOCOM Focal Point</b>	<b>(813) 826-1035</b>

E-Mail: **defensechallenge@osd.mil**

Web:

**<https://cto.acqcenter.com/osd/portal.nsf>**

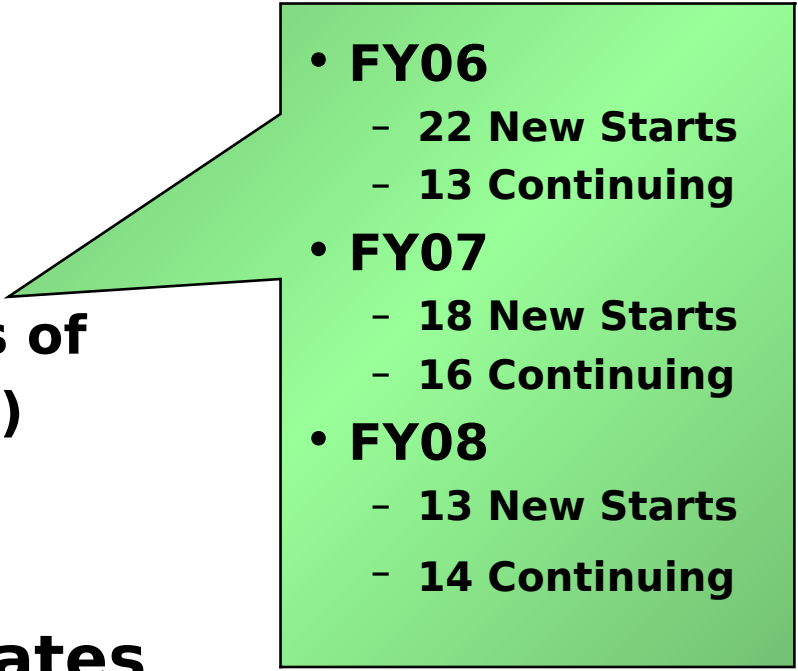
# ***DAC Measures / Factoids***

## ***(Since Program Inception)***

### **Metrics & Measures**

#### **(FY03-08)**

- **Interest & DoD Ability to Support**
  - **1716 proposals submitted**
  - **353 endorsed by Programs of Record (PoRs) / (PEOs/PMs)**
  - **97 projects awarded (~\$146.5M)**
- **80 companies from 31 states**
  - **70% are small / medium enterprise technology providers, not by design or mandate**

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- **FY06**
    - 22 New Starts
    - 13 Continuing
  - **FY07**
    - 18 New Starts
    - 16 Continuing
  - **FY08**
    - 13 New Starts
    - 14 Continuing

# Summary of DAC

## Successes:

### SprayCool Counter Targeting System (CTS) / Weapon Surveillance

**System (WSS) - Army / INSCOM Addressed:**  
Prototype Jan 05  
(DAC Product)



Size 39"x28"x27"  
Weight 335 lbs

**Miniaturized (Follow-on)**



Size (est) 11"x 6"x 5"  
Weight 15-18 lbs



Size 10"x 24"x17"  
Weight 100 lbs

- **Form - Reduced weight 82%**
- **Fit - Reduced cubic space 92%**
- **Power Consumption - Reduced 50%**

#### • **Participants:**

- Army - Research Development Engineering Command (RDECOM) & Intelligence & Security Command (INSCOM)
- Isothermal Research Inc, Lakeview WA

• **Price:** \$720 DAC/\$285 Generation III per unit

- Cooling & environmental contamination of field electronics - excessive downtime, low MTBF, operational impacts to surveillance systems

#### • **Description:**

- Force protection against Man Portable Air Defense Systems (MANPADS) & mortar attacks (CTS / WSS)
- Self-contained, hermetically-sealed, aluminum housing system uses closed-loop cooling
- Reduced form and fit from 325 pounds to less than 100

#### **Status:**

- Tested and qualified under DAC
- 5 systems deployed to OIF
- Follow-on initiative by INSCOM to miniaturize using Field Programmable Gate Arrays (FPGA)

# Summary of DAC Successes:

## Mini Combat Trauma Patient Simulation System (Army)



### Technology

- Uses the Emergency Care Simulator™ (ECS™) a computerized mannequin driven by sophisticated physiological models
- Enhances portability, affordability and ease of deployment with active forces

### The So What

- Simulates, replicates, and assesses battlefield injuries
- Monitors movement of casualties on the battlefield

### Participants

- U.S. Army RDECOM STTC
- USNS Mercy; Field Medical Service School (FMSS), Camp Pendleton; METI, Sarasota, FL

### Status

- Completed 1Q05
- Change agent for FMSS - trainee attrition rate has dropped from 23% to 6%
- Over 300 Corpsmen trained per month along side Division doctors and nurses - many deployed
- To date: 14 simulators procured by Navy (7 each at Pendleton & Lejeune); 90 systems on contract to Army for fielding at 18 sites

POC: Karen Wilson (703) 806-0992  
PM: Jack Norfleet, (407) 384-3897

- Captures time of patient diagnosis and treatment

### Funding

	<u>FY03</u>	<u>FY04</u>	<u>Total</u>
	-		
DAC	\$.190M	\$.320M	\$.510M
Sponsor	\$.025M		

### Benefits

RDTE Cost Savings: \$.0525M Mfg Savings: \$.033M

O&S Cost Savings: \$0.144M annually

Procurement Cost Savings: \$1.15M

Fielding Reduction: none

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# ***Summary of DAC Successes:***

## ***Additional Examples (Deployed or Deploying for GWOT)***

- ***Automated Enhanced Position Location & Reporting System (EPLRS) - Navy / USMC***
  - Network planning for Internet Protocol (IP), enables 1 Marine to do in an hour what used to take 4 Marines a day
  - Deployed tactical release to 900 users within USMC II MEF to Iraq (Fall 2005)
- ***Enhanced Gunfire Detection System - SOCOM***
  - Acoustic system to detect fire from insurgents
  - Used April 2005 in Kirkuk, Iraq
- ***Weapons Shock Profile Database - SOCOM***
  - Develops a digital live fire profile for small arms weapon systems
  - Used at Crane Indiana Naval Surface Warfare Center to more rapidly field weapons
- ***Enhanced Fly-Away SATCOM - AF***
  - Keeps remotely-operating units connected
  - Used in the mountains of Afghanistan, Iraqi deserts, & support recovery operations for Katrina and Rita
- ***Common Tactical Picture Ground Mobile and Air Based Command and Control System - Navy***
  - Provides first-ever on-the-move C2 technology for the USMC expeditionary assault vehicle
  - Deployed to Iraq fall 2004
- ***MK-46 Machine Gun Semi - Rigid Ammunition Containers - SOCOM***
  - Quieter & more durable than hard-material predecessors
  - Used by SOF world-wide to protect linked ammunition for the M249 Automatic Weapon
- ***Dismounted Infantry Virtual Simulation for Military Operations in Urban Terrain (MOUT) - Army***
  - Virtual MOUT training system that immerses the warfighter in a networked combat simulation
  - Realistically prepares for operations in Iraq
- ***Second Generation Rail Interface System & Miniature Day / Night Sight (SOCOM)***
  - More reliable, rugged, reduced weight weapon accessories with improved target acquisition
  - Projected procurement: >\$250M Virtual MOUT
- ***High Performance Standard Advanced Dewar Assembly II (Navy / USMC)***
  - Improves USMC M1A1 thermal imaging in support of Firepower Enhancement Program
  - Projected procurement: \$3M

# DAC Participation

## (By Company & Location, FY03-06 Awards)

